

**60th Medical Group (AMC), Travis AFB, CA**  
**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)**  
**FINAL REPORT SUMMARY**

(Please type all information. Use additional pages if necessary.)

PROTOCOL #: FDG20120036A

DATE: 7 MAY 2015

PROTOCOL TITLE: "General surgery training in animal models (pig, *Sus scrofa*; sheep, *Ovis aries*; goat, *Capra hircus*), including advanced combat trauma Interventions, advanced laparoscopic procedures, and cardiovascular procedures."

PRINCIPAL INVESTIGATOR (PI) / TRAINING COORDINATOR (TC): Maj Sean Martin

DEPARTMENT: Surgery

PHONE #: 423-5188

INITIAL APPROVAL DATE: 20 Sep 2012

LAST TRIENNIAL REVISION DATE: 28 Aug 2014

FUNDING SOURCE: Surgeon General's Office

1. **RECORD OF ANIMAL USAGE:**

Animal Species:	Total # Approved	# Used this FY	Total # Used to Date
Sus scrofa	75/year	27	146
Ovis aries	20/year	0	0

2. **PROTOCOL TYPE / CHARACTERISTICS:** (Check all applicable terms in **EACH** column)

<input checked="" type="checkbox"/> Training: Live Animal	<input checked="" type="checkbox"/> Medical Readiness	<input type="checkbox"/> Prolonged Restraint
<input type="checkbox"/> Training: non-Live Animal	<input type="checkbox"/> Health Promotion	<input type="checkbox"/> Multiple Survival Surgery
<input type="checkbox"/> Research: Survival (chronic)	<input type="checkbox"/> Prevention	<input type="checkbox"/> Behavioral Study
<input type="checkbox"/> Research: non-Survival (acute)	<input type="checkbox"/> Utilization Mgt.	<input type="checkbox"/> Adjuvant Use
<input type="checkbox"/> Other ( )	<input checked="" type="checkbox"/> Other (Treatment )	<input type="checkbox"/> Biohazard

3. **PROTOCOL PAIN CATEGORY (USDA):** (Check applicable) ☐ C ☒ D ☐ E

4. **PROTOCOL STATUS:**

**\*Request Protocol Closure:**

☐ Inactive, protocol never initiated

☐ Inactive, protocol initiated but has not/will not be completed

☒ Completed, all approved procedures/animal uses have been completed

5. **Previous Amendments:**

List all amendments made to the protocol.. IF none occurred, state NONE. Do not use N/A.

**For the Entire Study Chronologically**

Amendment Number	Date of Approval	Summary of the Change
1	30 July 2013	Personnel Changes
2	14 Nov 2013	Personnel Changes

3	18 July 2014	Personnel Changes
4	6 Aug 2014	Personnel Changes

6. **FUNDING STATUS:** Funding allocated: \$43,000 Funds remaining: \$

7. **PROTOCOL PERSONNEL CHANGES:**

Have there been any personnel/staffing changes (PI/CI/AI/TC/Instructor) since the last IACUC approval of protocol, or annual review? ☒ Yes ☐ No

If yes, complete the following sections (Additions/Deletions). For additions, indicate whether or not the IACUC has approved this addition.

**ADDITIONS:** (Include Name, Protocol function - PI/CI/AI/TC/Instructor, IACUC approval - Yes/No)

Maj Scott Zakaluzny-AI-Instructor, Capt Rachel Russo-AI-Surgeon, Dr. Travis Gerlach-AI-Surgeon

**DELETIONS:** (Include Name, Protocol function - PI/CI/AI/TC/Instructor, Effective date of deletion)

Capt Paul Vu-AI-Surgeon, Maj Matthew Sena-AI-Surgeon

8. **PROBLEMS / ADVERSE EVENTS:** Identify any problems or adverse events that have affected study progress. Itemize adverse events that have led to unanticipated animal illness, distress, injury, or death; and indicate whether or not these events were reported to the IACUC.

NONE

9. **REDUCTION, REFINEMENT, OR REPLACEMENT OF ANIMAL USE:**

**REPLACEMENT (ALTERNATIVES):** Since the last IACUC approval, have alternatives to animal use become available that could be substituted in this protocol without adversely affecting study or training objectives?

There is no substitute for live tissue training

**REFINEMENT:** Since the last IACUC approval, have any study refinements been implemented to reduce the degree of pain or distress experienced by study animals, or have animals of lower phylogenetic status or sentience been identified as potential study/training models in this protocol?

none

**REDUCTION:** Since the last IACUC approval, have any methods been identified to reduce the number of live animals used in this protocol?

Possibly, based on the numbers of trainees that are projected to be present during the sessions, the number of animals may be reduced for that lab if appropriate

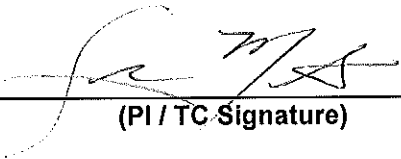
10. **PUBLICATIONS / PRESENTATIONS:** (List any scientific publications and/or presentations that have resulted from this protocol. Include pending/scheduled publications or presentations).

Not applicable

11. **Were the protocol objectives met, and how will the outcome or training benefit the DoD/USAF?**

Yes, this lab is consistently referenced as a highlight of the surgical rotation. This general surgery training protocol continues to provide useful education for staff, residents, interns, and medical students. Each animal is used by multiple trainees under the direction of a staff surgeon, ensuring that maximum benefit is derived. Students improve their anatomy knowledge, tissue and instrument handling, clinical decision making, and technical skills. The labs have been evenly divided between trauma and general surgery/laparoscopic skills as outlined in the protocol/training curriculum. Feedback from the participants has been strongly positive and demand for these classes has been increasing. A total of 320 students received 1180 hours of training this past year.

12. **PROTOCOL OUTCOME SUMMARY:** (Please provide, in "ABSTRACT" format, a summary of the protocol objectives, materials and methods, results - include tables/figures, and conclusions/applications.)

  
(PI / TC Signature)

SEAN P. MARTIN, MD  
MAJ, USAF, MC  
GENERAL SURGERY RESIDENCY PROGRAM DIRECTOR  
60 MEDICAL GROUP/SGCQG

30 June 2015  
(Date)

**Attachments:**

Attachment 1: Defense Technical Information Center (DTIC) Abstract Submission (Mandatory)

**Attachment 1**

**Defense Technical Information Center (DTIC) Abstract Submission**

This abstract requires a brief (no more than 200 words) factual summary of the most significant information in the following format: Objectives, Methods, Results, and Conclusion.

**Objectives:** Provide live tissue training experience for residents in multiple specialties to cover a wide breadth of general, vascular, and trauma surgical procedures.

**Methods:** The porcine model using general anesthesia during laparoscopic, endoscopic, and open surgical procedures.

**Results:** The residents are evaluated based on their prerequisite objective goals for their ability to perform procedures dependent upon their skill set and level of training. For further details regarding this, please reference the manuscript detailing surgical procedures and expectations for participating residents and staff instructors.

**Conclusion:** This protocol is meeting the core mission of the CIF to support our GME program in General and Vascular Surgery Residency

Grant Number: \_\_\_\_\_

From: \_\_\_\_\_

**\*\*If you utilized an external grant, please provide Grant # and where the grant came from. Thank you.**

Chlorophyll

1.000

For each, 1.000 mg of dry weight

1.000 mg of dry weight